

**EXPRESS TERMS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
STATE FIRE MARSHAL (SFM)**

**REGARDING THE PROPOSED ADOPTION BY REFERENCE  
OF THE 2003 EDITION UNIFORM MECHANICAL CODE,  
WITH PROPOSED AMENDMENTS FOR THE  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4  
2004 CALIFORNIA MECHANICAL CODE (CMC)**

**California State Fire Marshal  
UMC 2003 Adoption Matrix / Chapter 1- Administration  
Adopt only those sections listed below**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
	101		101.1		101.1	X	SFM proposes to carry existing amendments to new code
	102		102.0	102.0	102.0	X	SFM proposes to carry existing amendments to new code
	103.1.		103.1.	103.0	103.0	X	SFM proposes to carry existing amendments to new code
	103.1.1		103.1.1		103.1.1	X	SFM proposes to carry existing amendments to new code

			103.1.5		103.1.5	X	SFM proposes to carry forward existing amendments to new code
			103.1.6		103.1.6	X	SFM proposes to carry forward existing amendments to new code
			103.1.7		103.1.7	X	SFM proposes to carry forward existing amendments to new code
			105.2		105.1	X	SFM proposes to carry forward existing amendments to new code; renumbered in 2003 UMC
	105.4		105.3		105.2	X	SFM proposes to carry forward existing amendments to new code; renumbered in 2003 UMC
	105.5		105.4		105.3	X	SFM proposes to carry forward existing amendments to new code; renumbered in 2003 UMC
	108.1		108.1	108.1	108.1	X	SFM proposes to carry forward existing amendments to new code
			108.1.1		108.1.1	X	SFM proposes to carry forward existing amendments to new code
	108.1.1.13		108.1.1.13		108.1.1.13	X	SFM proposes to carry forward existing amendments to new code
	108.3		108.3	108.3	108.3	X	SFM proposes to carry forward existing amendments to new code
	109.2		109.2		109.1	X	SFM proposes to carry forward existing amendments to new code; renumbered in 2003 UMC

	112.2 ITEM 6		112.2.6		112.2.6	X	SFM proposes to carry forward existing amendments to new code
	113.4		113.2.1		113.2.1	X	SFM proposes to carry forward existing amendments to new code
	113.5		113.2.2		113.2.2	X	SFM proposes to carry forward existing amendments to new code
	113.6		113.2.3		113.2.3	X	SFM proposes to carry forward existing amendments to new code
	113.7		113.2.4		113.2.4	X	SFM proposes to carry forward existing amendments to new code
	113.8		113.2.5		113.2.5	X	SFM proposes to carry forward existing amendments to new code
	114.1		114.1.2		114.1.1	X	SFM proposes to carry forward existing amendments to new code; renumbered in 2003 UMC
	114.2		114.2.2	114.2		X	The SFM previously amended 2001 CMC Sec 114.2.2 which is the same as 2003 UMC.
	116.5		116.5	116.5	116.5	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
	118		118.0		118.0	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
	118		118.1		118.1	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code

	118	118.3	118.2		118.2	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
	118	118.3	118.3		118.3	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
	118	118.4	118.4		118.4	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
	118	118.5	118.5		118.5	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
	119		119		119.0	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
	120		120.0		120.0	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
	121.1		121.0		121.0	X	SFM proposes to carry forward existing amendments to new code
	121.2		121.1		121.1	X	SFM proposes to carry forward existing amendments to new code
			121.2		121.2	X	SFM proposes to carry forward existing amendments to new code

California State Fire Marshal  
 UMC 2003 Adoption Matrix / Chapter 2 - Definitions  
**Adopt entire Chapter 2 with amendments listed below**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
<b>203.0</b>	<b>203.0</b>	<b>203.0</b>	<b>203.0</b>	<b>203.0</b>	<b>203.0</b>	X	.
Approved		Approved	Approved	Approved	Approved	X	SFM proposes to carry forward existing amendments to new code
Approved Agency	Approved Agency					†	UMC language not adopted
		Approved Agency	Approved Agency	Approved Agency	Approved Agency	X	SFM proposes to carry forward existing amendments to new code amendments to new code
Assembly Building	Assembly Building					†	UMC language not adopted
		Assembly Building	Assembly Building	Assembly Building	Assembly Building	X	SFM proposes to carry forward existing amendments to new code
<b>204.0</b>	<b>204.0</b>	<b>204.0</b>	<b>204.0</b>	<b>204</b>	<b>204</b>		
Brine	Brine	Brine	Brine			†	UMC language not adopted
				Brine		X	To Repeal prior SFM amendment, referenced standards outdated
Building Code		Building Code		Building Code		†	UMC language not adopted.
	Building Code		Building Code		Building Code	X	SFM proposes to carry forward existing amendments to new code
Building Official		Building Official		Building Official		†	UMC language not adopted.
	Building Official		Building Official		Building Official	X	SFM proposes to carry forward existing amendments to new code

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
<b>207.0</b>	<b>207.0</b>	<b>207.0</b>	<b>207.0</b>				
N/A	N/A	Enforcing Agency	Enforcing Agency	Enforcing Agency	Enforcing Agency	X	SFM proposes to carry forward existing amendments to new code
<b>214.0</b>	<b>214.0</b>	<b>214.0</b>	<b>214.0</b>				
Listed and Listing		Listed and Listing		Listed and Listing		†	UMC language not adopted
	Listed and Listing		Listed and Listing		Listed and Listing	X	SFM proposes to carry forward existing amendments to new code
<b>215.0</b>	<b>215.0</b>	<b>215.0</b>	<b>215.0</b>				
N/A	Machinery Room	N/A	Machinery Room		Machinery Room	X	SFM proposes to carry forward existing amendments to new code
<b>217.0</b>	<b>217.0</b>	<b>217.0</b>	<b>217.0</b>				
	Occupancy Classification	Occupancy Classification	Occupancy Classification	Occupancy Classification	Occupancy Classification (New)	X	SFM proposes to carry forward existing amendments to new code including amendment revisions to Group E Occupancies to coordinate with the CBC
<b>223.0</b>	<b>223.0</b>	<b>223.0</b>	<b>223.0</b>				
	UMC		UMC	UMC	UMC	X	SFM proposes to carry forward existing amendments to new code
	UMC Standards		UMC Standards	UMC Standards	UMC Standards	X	SFM proposes to carry forward existing amendments to new code

California State Fire Marshal  
 UMC 2003 Adoption Matrix / Chapter 3 - General Requirements

**Adopt entire Chapter 3 with amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
					304.6	X	SFM proposes to amend this section for clarity.
					304.7	X	SFM proposes to adopt this section as amended by HCD

California State Fire Marshal  
 UMC 2001 Adoption Matrix / Chapter 4 – Ventilation Air Supply

**Adopt entire Chapter 4 with amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
	402.3		401.1	401.0	401.0	X	SFM proposes to carry forward existing amendments to new code Note: 2001 CBC Standards were removed by CBSC. If these standards are not reinstated, this section shall be referred to the 1998 CBC Standards Part 12.

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 5- Exhaust Systems  
**Adopt entire Chapter 5 with amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
	N/A	502		502		X	
		N/A	N/A	Fire Barrier Wall		†	UMC language not adopted
		N/A	N/A	Fire Partition		†	UMC language not adopted
	508.5	509.5	509.5		509.2.3.1	X	SFM proposes to carry forward existing amendments to new code
				510.7.1		†	UMC language not adopted
508.4		508.4			510.7.1.1	X	SFM proposes to carry forward the 2001 CMC Section 508.4 model code as a state amendment in order to maintain the current level of fire and life safety.
				510.7.2		†	UMC language not adopted
				510.7.2.1		†	UMC language not adopted
				510.7.2.2		†	UMC language not adopted
				510.7.5	510.7.5	X	SFM proposes to amend this section for clarity.
				511.1.6	511.1.6	X	SFM proposes to amend this section for clarity.
				512.2.5	512.2.5	X	SFM proposes to amend this section for clarity.
				513.2.2.1	513.2.2.1	X	SFM proposes to amend this



1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
							section for clarity.
				513.10	513.10	X	SFM proposes to amend this section for clarity.
				513.10.1		†	UMC language not adopted
				513.10.1.1		†	UMC language not adopted
				513.10.2		†	UMC language not adopted
				516.2.5	516.2.5	X	SFM proposes to amend this section for clarity.
				516.2.7	516.2.7	X	SFM proposes to amend this section for clarity.

California State Fire Marshal  
 UMC 2003 Adoption Matrix / Chapter 6-Duct Systems  
**Adopt entire Chapter 6 with amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
			606.8		606.8	X	SFM proposes to carry forward existing amendments to new code
	606.1.1		607.1.1		607.1.1	X	SFM proposes to carry forward existing amendments to new code
	606.1.2		607.1.2		607.1.2	X	SFM proposes to carry forward existing amendments to new code
	608		609.2	609.0	609.0	X	SFM proposes to carry existing amendments with new revisions to new code for clarity.

California State Fire Marshal  
 UMC 2003 Adoption Matrix / Chapter 7-Combustion Air  
**Adopt entire Chapter 7 without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	<b>2003 UMC</b>	<b>2003 Proposed/ Amendment #</b>	SFM Local Fire	Comments
						X	

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 8-Chimney and Vents  
**Adopt entire Chapter 8 without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	<b>2003 UMC</b>	<b>2003 Proposed/ Amendment #</b>	SFM Local Fire	Comments
						X	

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 9- Installation of Specific Equipment  
**Adopt entire Chapter 9 with amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
		903.0		N/A	904.1.1	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		904.0		N/A	904.1.2	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
		904.1		N/A	904.1.2.1	X	SFM proposes to carry forward existing adopted UMC language as amendment to new code
		904.2		N/A	904.1.2.2	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		904.4		N/A	904.1.2.4	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		904.5		N/A	904.1.2.5	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		904.6		N/A	904.1.2.6	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		904.7		N/A	904.1.2.7	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
				N/A	904.10	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.1		N/A	904.10.1.2	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code

		910.2		N/A	904.10.1.4	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.3		N/A	904.10.1.5	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.4		N/A	904.10.1.6	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
				N/A	904.10.3	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.5		N/A	904.10.3.5	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.6		N/A	904.10.3.6	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.7		N/A	904.10.3.7	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.7.1		N/A	904.10.3.7.1	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.7.2		N/A	904.10.3.7.2	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.7.3		N/A	904.10.3.7.3	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.7.4		N/A	904.10.3.7.4	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.7.5		N/A	904.10.3.7.5	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.7.6		N/A	904.10.3.7.6	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code

		910.8		N/A	904.10.3.8	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.7.3		N/A	904.10.3.8	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.8.1		N/A	904.10.3.8.1	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.8.2		N/A	904.10.3.8.2	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.8.3		N/A	904.10.3.8.3	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.8.4		N/A	904.10.3.8.4	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		910.8.5		N/A	904.10.3.8.5	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		908.0		N/A	904.11	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		909.0		N/A	904.12	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		909.1		N/A	904.12.1	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		909.2		N/A	904.12.2	X	SFM proposes to carry existing adopted UMC language as amendment to new code
		909.3		N/A	904.12.3	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
		909.4		N/A	904.12.4	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code

		909.5		N/A	904.12.5	X	SFM proposes to carry forward existing adopted UMC language as an amendment to new code
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California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 10-Steam and Hot-Water Boilers

**Adopt entire Chapter 10 without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						X	

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 11-Refrigeration

**Adopt entire Chapter 11 without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						X	

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 12-Hydronics  
**Adopt entire Chapter 12 without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						X	The SFM proposed adoption of this chapter in the 2000 code cycle but was not published in the 2001 CMC.

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 13-Fuel Gas Piping  
**Chapter 13 is not adopted**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						†	SFM proposes to continue the non adoption of UMC language as this chapter is a duplication of codes referenced and adopted in the UPC.



California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 14-Process Piping  
**Adopt entire Chapter 14 without amendment**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						X	

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 15-Solar Systems  
**Chapter 15 is not adopted**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						†	

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 16 - Stationary Fuel Cell Power Plants

**Adopt entire Chapter 16 without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						X	The 2001 CMC Chapter has been renumbered by the 2003 UMC From Standards to new UMC Chapter 16.

California State Fire Marshal  
 UMC 2003 Adoption Matrix Chapter 17-Standards

**Adopt entire Chapter 17 without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						X	The 2001 CMC Chapter has been renumbered by the 2003 UMC

California State Fire Marshal  
 UMC 2003 Adoption Matrix Appendix A – UMC Standards 6-2 and 6-5  
**Adopt entire Appendix A without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						X	

California State Fire Marshal  
 UMC 2003 Adoption Matrix Appendix B,  
 Procedures to Be Followed to Place Gas Equipment in Operation  
**Appendix B not adopted**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						†	

California State Fire Marshal

UMC 2003 Adoption Matrix Appendix C – Installation and Testing of Oil (Liquid) Fuel-Fired Equipment

**Appendix C is not adopted**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						†	

California State Fire Marshal

UMC 2003 Adoption Matrix Appendix D – Unit Conversion Tables

**Adopt entire Appendix D without amendments**

1997 UMC	1998 CA Amendment #	2000 UMC	2001 CA Amendment #	2003 UMC	2003 Proposed/ Amendment #	SFM Local Fire	Comments
						X	

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**Legend for Express Terms:**

1. Existing California amendments or code language being modified : *All such language appears in Italics, modified language is underlined.*
2. New California amendment: All such language appears underlined and in Italics.
3. Repealed Text: All such language appears in ~~Strikeout~~.

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**Chapter 1 Administration**

**108.1.1 [ For HCD 1 & HCD 2, SFM ] Application-Vesting authority.** *When adopted by a state agency, the provisions of this code shall be enforced by the appropriate enforcing agency, but only to the extent of authority granted to such agency by the State Legislature.*

**114.1.1 [For SFM]** *The application, plans, specifications, computations and other data filed by an applicant for permit shall be reviewed by the building official. Such plans may ~~[for SFM]~~ shall be reviewed by other departments of this jurisdiction ~~[for SFM]~~ in accordance with state law, Health and Safety Code Section 13146, in occupancies regulated by the state fire marshal in order to verify compliance with applicable laws under their jurisdiction. If the building official finds that the work described in an application for a permit and the plans, specifications and other data filed there -with conform to the requirements of the code and other pertinent laws and ordinances and that the fees specified in Section 304 have been paid, the building official shall issue a permit therefore to the applicant.*

**CHAPTER 2 DEFINITIONS****Group E Occupancies**

**Division 1.** Any building used for educational purposes through the 12<sup>th</sup> grade by fifty (50) or more persons for more than twelve (12) hours per week or four hours in any one day.

**Division 2.** Any building used for educational purposes through the 12<sup>th</sup> grade by less than fifty (50) persons for more than twelve (12) hours per week or four hours in any one day.

**[For SFM ] Exception:** *A residence used as a home school for the children who normally reside at the residence. Such residences shall remain classified as Group R, Division 1 or 3*

**Division 3. [For SFM]** *Any nonresidential building or portion thereof used for day-care purposes for more than six children/persons. Any residential building used for day-care purposes for more than 14 persons. Licensing categories that may use this category include: Adult Day Care Facilities, Family Day Care Homes, Day Care Centers, Adult Day Support Center, Day Care Center for Mildly Ill Children, Infant Care Center, School-Age Child Day Care Centers.*

## Chapter 3 General Requirements

**304.6 Liquefied Petroleum Gas Facilities.** Containers, container valves regulating equipment, and appurtenances for the storage and supply of liquefied petroleum gas shall be installed in accordance with the [For SFM] California Fire Code.

## Chapter 5 Exhaust Systems

### 502.0 Definitions

**FIRE BARRIER WALL.** [SFM does not adopt]

**FIRE PARTITION.** [SFM does not adopt]

### 510.7 Interior Installations

**510.7.1 [SFM does not adopt]** In all buildings more than one story in height, and in one-story buildings where the roof-ceiling assembly is required to have a fire resistance rating, the ducts shall be enclosed in a continuous enclosure extending from the lowest fire-rated ceiling or floor above the hood, through any concealed spaces, to or through the roof so as to maintain the integrity of the fire separations required by the applicable building code provisions. The enclosure shall be sealed around the duct at the point of penetration of the lowest fire-rated ceiling or floor above the hood in order to maintain the fire resistance rating of the enclosure and shall be vented to the exterior of the building through weather-protected openings.

Exception: The continuous enclosure provisions shall not be required where a field-applied grease duct enclosure or a factory-built grease duct enclosure (see Section 507.2.3) is protected with a listed duct through-penetration protection system equivalent to the fire resistance rating of the assembly being penetrated, and the materials are installed in accordance with the conditions of the listing and the manufacturer's instructions and are acceptable to the Authority Having Jurisdiction.

**510.7.1.1 [For SFM]** A grease duct serving a Type I hood which penetrates a ceiling, wall or floor shall be enclosed in a duct enclosure from the point of penetration. A duct may only penetrate exterior walls at locations where unprotected openings are permitted by the building code. Duct enclosures shall be constructed in accordance with the California Building Code. Duct enclosures shall be of a least one-hour fire-resistive construction in all buildings and shall be of two-hour fire-resistive construction in Types I and II fire-resistive buildings. The duct enclosure shall be sealed around the duct at the point of penetration and vented to the exterior through weather protected openings. The enclosure shall be separated from the duct by at least three (3) inches (76mm) and not more than twelve (12) inches (305mm) and shall serve a single grease exhaust duct system.

### 510.7 Interior Installations

**510.7.1 [SFM does not adopt]**

**510.7.2 [SFM does not adopt]**

**510.7.2.1 [SFM does not adopt]**

**510.7.2.2 [SFM does not adopt ]**

**510.7.5** If openings in the enclosure walls are provided, they shall be protected by approved self-closing fire doors of proper rating **[For SFM]** in accordance with the California Building Code. Fire doors shall be installed in accordance with NFPA 80, Standard for Fire Doors and Fire Windows **[For SFM]** UBC Standard 7-2. Openings on other listed materials or products shall be clearly identified and labeled according to the terms of the listing and the manufacturer's instructions and shall be acceptable to the Authority Having Jurisdiction. The panels shall be readily accessible.

**511.1.6** All wiring and electrical equipment shall comply with NFPA 70, National Electrical Code **[For SFM]** California Electrical Code.

**512.2.5** All electrical equipment shall be installed in accordance with NFPA 70, National Electrical Code **[For SFM]** California Electrical Code, with due regard to the effects of heat, vapor, and grease on the equipment.

**[SFM has previously submitted proposed rulemaking to the California Building Standards under the 2003 annual code cycle. The SFM has proposed amendments to the 2001 California Building and Fire Codes addressing updates to the National recognized standards as adopted and amended in chapter 35 of CBC and Article 91 of CFC. The proposed amendments listed below in chapter 14 are correlated with the proposed amendments to the CBC and CFC.]**

**513.2.2.1** Automatic fire-extinguishing systems shall be installed in accordance with the terms of their listing, the manufacturer's instructions, and the following standards **[For SFM]** adopted by reference in the California Building Code where applicable.

- (A) NFPA 12 **[For SFM]** 2000 Edition Standard on Carbon Dioxide Extinguishing Systems.
- (B) NFPA 13 **[For SFM]** 1999 Edition, Standard for the Installation of Sprinkler Systems.
- (C) NFPA 17 **[For SFM]** 2002 Edition, Standard for Dry Chemical Extinguishing Systems.
- (D) NFPA 17A **[For SFM]** 2002 Edition, Standard for Wet Chemical Extinguishing Systems.

**513.10 Portable Fire Extinguishers.** **[For SFM not adopted-For SFM regulated occupancies see Title 19, Chapter 3, Article 5]**

**513.10.1** **[SFM does not adopt]**

**513.10.1.1** **[For SFM not adopted]**

**513.10.2** **[For SFM not adopted]**

**516.2.5** No electrical wiring shall be installed in the interior sections of the hood plenum that might become exposed to grease.

Exception: As permitted by NFPA 70, National Electrical Code **[For SFM]** California Electrical Code.

**516.2.7** Listing evaluation shall include the following:

**(A)** Capture and containment of vapors at published and labeled airflows.

(B) Grease discharge at the exhaust outlet of the system not to exceed an average of 5 mg/m<sup>3</sup> of exhausted air sampled from that equipment at maximum amount of product that is capable of being processed over a continuous 8-hour test per EPA Test Method 202, Determination of Condensable Particulate Emissions for Stationary Sources, with the system operating at its minimum listed airflow.

(C) Listing and labeling of clearance to combustibles from all sides, top, and bottom.

(D) Electrical connection in the field in accordance with NFPA 70, National Electrical Code *[For SFM] California Electrical Code*.

(E) Interlocks on all removable components that lie in the path of airflow within the unit to ensure that they are in place during operation of the cooking appliance.

## Chapter 6 Duct Systems

### 609.0 Automatic Shutoffs.

Air-moving systems supplying air in excess of 2000 cubic feet per minute (944 L/s) to enclosed spaces within buildings shall be equipped with an automatic shutoff. Automatic shutoff shall be accomplished by interrupting the power source of the air-moving equipment upon detection of smoke in the main supply-air duct served by such equipment. Smoke detectors shall be labeled by an approved agency- *[For SFM] approved and listed by California State Fire Marshal* for air duct installation and shall be installed in accordance with the manufacturer's approved *[For SFM] installation* instructions. Such devices shall be compatible, with the operating velocities, pressures, temperatures and humidities of the system. Where fire detection or alarm systems are provided for the building, the smoke detectors required by this section shall be supervised by such systems *and installed in accordance with NFPA 72 and the California Fire Code*.

Exceptions: (1) When the space supplied by the air-moving equipment is served by a total coverage smoke-detection system complying with *[For SFM] the California Fire Code*, interconnection to such system may be used to accomplish the required shutoff.

(2) Automatic shutoff is not required when all occupied rooms served by the air-handling equipment have direct exit to the exterior and the travel distance does not exceed 100 feet (30,480 mm).

(3) Automatic shutoff is not required for Group R, Division 3 and Group U Occupancies.

(4) Automatic shutoff is not required for approved smoke-control systems or where analysis demonstrates shutoff would create a greater hazard such as may be encountered in air-moving equipment supplying specialized portions of Group H Occupancies. Such equipment shall be required to have smoke detection with remote indication and manual shutoff capability at an approved location.

(5) Smoke detectors that are factory installed in listed air-moving equipment may be used in lieu of smoke detectors installed in the main supply-air duct served by such equipment.

## CHAPTER 9 INSTALLATION OF SPECIFIC EQUIPMENT

### 904.1.1 [For HCD 1 and HCD 2, SFM] Access

A furnace room shall have an opening or door and passageway thereto not less than two (2) feet (610 mm) in width and large enough to permit removal of the largest furnace in such room. The furnace shall be installed so as to permit removal without disturbing piping, conduits, appurtenant valves and junction boxes.

#### Exceptions:

1. When the furnace room is large enough to permit dismantling the furnace within the room, the access opening and passageway need be large enough only to permit removal of the largest piece of furnace. This exception shall not be construed to waive the requirements of a minimum door and passageway of two (2) feet (610 mm).



2. Access to warm-air furnaces installed in under-floor spaces shall comply with Section 904.12.2.

3. Access to warm-air furnaces installed in an attic or furred space shall comply with Section 904.11

4. Access to warm-air furnaces installed on a roof or on an outside wall structure shall comply with Section 904.10

An unobstructed working space not less than thirty (30) inches (762 mm) in depth and the height of the furnace, but not less than thirty (30) inches (762 mm), shall be provided along the entire front or firebox side of every warm-air furnace when the door of the furnace enclosure is open.

Heating system air filters, fuel-control valves, vent collars, air-handling units and externally mounted controls shall be accessible for maintenance, repair and replacement. Access space shall be as specified for cooling equipment in Section 1106.3.

**904.1.2 [For HCD 1 and HCD 2, SFM] Prohibited Installations** Warm-air furnaces shall not be installed:

**904.1.2.1 [For HCD 1 and HCD 2, SFM]**In a closet or alcove less than twelve (12) inches (305 mm) wider than the furnace or furnaces installed therein with a minimum clear working space less than three (3) inches (76 mm) along the sides, back and top of the furnace.

**Exception:** Replacement forced-air furnaces or air-conditioning cooling coils may be installed in an existing closet or alcove with lesser width and depth when approved by the Administrative Authority and provided that such width and depth is in compliance with conditions of listing. Combustion air openings at the rear or side of the closet shall meet the requirements of Chapter 7.

**904.1.2.2 [For HCD 1 and HCD 2, SFM]** In a hazardous location.

**904.1.2.3 [For HCD 1 and HCD 2, SFM]** In an occupancy, unless separated by fire-resistive construction from the rest of the building as required by the special hazards section of the Building Code.

**904.1.2.4 [For HCD 1 and HCD 2, SFM]** In a room used or designed to be used as a bedroom, bathroom, closet or in any enclosed space with access only through such room or space.

**Exception:** Direct vent furnaces, enclosed furnaces and electric heating furnaces. Access to furnaces located in an attic or under-floor crawl space may be through a closet.

**904.1.2.5 [For HCD 1 and HCD 2, SFM]** Outside of a building unless listed for exterior installation or enclosed in a weatherproof housing complying with Section 904.1.1

**904.1.2.6 [For HCD 1 and HCD 2, SFM]** With clearance along the combustion chamber opening side of less than six (6) inches (152 mm) or working space along the entire front or firebox side less than specified in Section 903.0. 103

#### **904.10 Equipment on Roofs [For HCD 1 and HCD 2, SFM] or Exterior Walls of Buildings**

**904.10.1.2** Roofs on which equipment is to be installed shall be capable of supporting the additional load or shall be reinforced to support the additional load. A roof or exterior building wall supporting a furnace shall comply with the requirements for roof and wall structures specified in the California Building Code, and the equipment shall be listed or approved for such use.

**904.10.1.4 [For HCD 1 and HCD 2, SFM] Weather Protection.** Unless listed or designed for outside installation, a furnace on the roof of a building shall be enclosed in a penthouse complying with the requirements of the California Building Code for roof structures or shall be completely enclosed in a weatherproof housing. The housing, when constructed of metal, shall be of galvanized steel not less than 0.024 inch (0.61 mm) (No. 24 U.S. Standard gage) or of aluminum not less than No. 22 B.&S. gage supported on

a substantial metal frame. The housing shall be not larger than necessary to properly cover and provide a minimum six (6) inch (152 mm) clearance around the appliance or appliances enclosed therein, including all controls and draft diverters.

**904.10.1.5 [For HCD 1 and HCD 2, SFM] Ventilation.** An enclosure or penthouse shall be provided with openings complying with the requirements of Chapter 7, together with means for proper ventilation of the furnace draft hood relief openings.

**904.10.1.6 [For HCD 1 and HCD 2, SFM] Clearance.** Clearance of the furnace from combustible construction shall be as specified in Section 304.1.

### **904.10.3 Access to Equipment on Roofs [For HCD 1 and HCD 2, SFM] or Exterior Walls of Buildings**

**904.10.3.5 [For HCD 1 and HCD 2, SFM] Platform.** A furnace located on a roof shall be installed on a substantial level platform. When the roof has a slope greater than four (4) in twelve (12), a level working platform at least thirty (30) inches (762 mm) in depth and width shall be provided along the firebox and control sides of the furnace. Sides of a working platform facing the roof edge below shall be protected by a substantial railing forty-two (42) inches (1067 mm) in height with vertical rails not more than twenty-one (21) inches (533 mm) apart, except that parapets at least twenty-four (24) inches (610 mm) in height may be utilized in lieu of rails or guards.

**904.10.3.6 [For HCD 1 and HCD 2, SFM] Catwalk.** On roofs having slopes greater than four (4) in twelve (12), a catwalk at least twenty-four (24) inches (610 mm) in width with substantial cleats spaced not more than sixteen (16) inches (406 mm) apart shall be provided from the roof access to the working platform at the appliance.

**904.10.3.7 [For HCD 1 and HCD 2, SFM] Roof Access Scuttle.** Required working platforms, railings and catwalks may be omitted when access to the equipment is through a required roof scuttle and all of the following provisions are met:

**904.10.3.7.1 [For HCD 1 and HCD 2, SFM]** The required scuttle is located immediately adjacent to the control side of the equipment unit.

**904.10.3.7.2 [For HCD 1 and HCD 2, SFM]** Controls, filters, burners, fans and motors are accessible for service and repair within two (2) feet (610 mm) of the edge of the equipment platform on the scuttle side.

**904.10.3.7.3 [For HCD 1 and HCD 2, SFM]** The equipment platform is not more than twenty (20) inches (508 mm) above the high side of the scuttle opening.

**904.10.3.7.4 [For HCD 1 and HCD 2, SFM]** A substantial working platform not less than thirty (30) inches (762 mm) in depth and width shall be provided directly below the scuttle at a point not less than thirty (30) inches (762 mm) or more than thirty-two (32) inches (813 mm) below the high side of the scuttle opening.

**904.10.3.7.5 [For HCD 1 and HCD 2, SFM]** Scuttles located on other than the roof incline side of the equipment unit shall have the hatch hinged on the low side of the scuttle. Hatches shall be equipped with means to ensure an opening angle of not less than 90 degrees (1.57 rad) nor more than 100 degrees (1.75 rad) from the closed position. Hatches and hardware, when open, shall be capable of withstanding a 300 pound (1334 N) lateral force from the roof incline side.

**904.10.3.7.6 [For HCD 1 and HCD 2, SFM]** Access to scuttles shall comply with Section 904.11.

**904.10.3.8 [For HCD 1 and HCD 2, SFM] Access to Equipment on Exterior Walls.** Every furnace installed in or on an exterior wall of a building, which is designed so that the burners or controls must be serviced from outside the building, shall be readily accessible. Furnaces located on the roof of a building shall be readily accessible.

#### **Exceptions:**

1. Permanent exterior ladders providing roof access need not extend closer than eight (8) feet (2438 mm) to the finish grade.
2. A portable ladder may be used for access for furnaces on the single-story portion of a Group R or U Occupancy.

3. Permanent ladders for equipment access need not be provided at parapets or walls less than thirty (30) inches (762 mm) in height. Permanent ladders providing roof access shall:

**904.10.3.8.1 [For HCD 1 and HCD 2, *SFM*] Have side railings which extend at least thirty (30) inches (762 mm) above the roof edge or parapet wall.**

**904.10.3.8.2 [For HCD 1 and HCD 2, *SFM*] Have landings less than eighteen (18) feet (5486 mm) apart measured from the finished grade.**

**904.10.3.8.3 [For HCD 1 and HCD 2, *SFM*] Be at least fourteen (14) inches (356 mm) in width.**

**904.10.3.8.4. [For HCD 1 and HCD 2, *SFM*] Have rungs not more than fourteen (14) inches (356 mm) on center.**

**904.10.3.8.5 [For HCD 1 and HCD 2, *SFM*] Have a minimum of six (6) inch (152 mm) toe space.**

**904.11 [For HCD 1 and HCD 2, *SFM*] Attic Furnaces (Upright and Horizontal) Upright furnaces may be installed in an attic or furred space more than five (5) feet (1524 mm) in height, provided the required listings and furnace and duct clearances are observed. Horizontal furnaces may be installed in an attic or furred space provided the required listings and furnace and duct clearances are observed.**

Clearances of a warm-air attic furnace from combustibles shall be as specified in Section 304.1.

An attic or furred space in which a warm-air furnace is installed shall be accessible by an opening and passageway as large as the largest piece of the furnace and in no case less than thirty (30) inches by thirty (30) inches (762 mm x 762 mm) continuous from the opening to the furnace and its controls.

**Exception:** The access opening into the space may be twenty-two (22) inches by thirty (30) inches (559 mm x 762 mm), provided the largest piece of equipment can be removed through the opening.

The distance from the passageway access to furnace shall not exceed twenty (20) feet (6096 mm) measured along the center line of the passageway. The passageway shall be unobstructed and shall have continuous solid flooring not less than twenty four (24) inches (610 mm) wide from the entrance opening to the furnace.

A level working platform not less than thirty (30) inches (762 mm) in depth and width shall be provided in front of the entire firebox side of the warm-air furnace, and if the furnace temperature-limit control, air filter, fuel-control valve, vent collar or air-handling unit is not serviceable from the firebox side of the furnace, a continuous floor not less than twenty-four (24) inches (610 mm) in width shall be provided from the platform in front of the firebox side of the furnace to and in front of this equipment.

**Exception:** A working platform need not be provided when the furnace can be serviced from the required access opening.

A permanent electric outlet and lighting fixture controlled by a switch located at the required passageway opening shall be provided at or near the furnace.

**904.12 [For HCD 1 and HCD 2, *SFM*] Warm-Air Furnaces Located in Under-Floor Spaces** A warm-air furnace installed in the under-floor area of a building shall comply with the following requirements:

**904.12.1 [For HCD 1 and HCD 2, *SFM*] Clearance from combustibles shall be as specified in Section 304.1.**

**904.12.2 [For HCD 1 and HCD 2, *SFM*] An access opening and passageway of a height and width sufficient to permit removal of the furnace, but in no case less than thirty (30) inches by thirty (30) inches (762 mm x 762 mm), shall be provided to the working space in front of the furnace. The access opening to the passageway shall be through an opening in an exterior wall of the building or through a trap door within the building. The distance from the passageway access to the center line of the working space in front of the furnace burner shall not exceed twenty (20) feet (6096 mm) measured along the center line of the passageway.**

**904.12.3 [For HCD 1 and HCD 2, SFM]** *A furnace supported from the ground shall rest on a concrete slab extending not less than three (3) inches (76 mm) above the adjoining ground level.*

**904.12.4 [For HCD 1 and HCD 2, SFM]** *The lowest portion of a suspended furnace shall have a clearance of at least six (6) inches (152 mm) from the ground. Excavation necessary to install a furnace shall extend to a depth of six (6) inches (152mm) below and twelve (12) inches (305 mm) on all sides of the furnace, except the control side, which shall have thirty (30) inches (762 mm). If the depth of the excavation for either furnace or passageway exceeds twelve (12) inches (305 mm), walls of the excavation shall be lined with concrete or masonry extending four (4) inches (102 mm) above the adjoining ground level. In floodplain areas the entire crawl space grade or height shall provide twelve (12) inch (305 mm) clearance between the bottom of the furnace and the ground.*

**904.12.5 [For HCD 1 and HCD 2, SFM]** *A permanent electric outlet and lighting fixture controlled by a switch located at the passageway opening shall be provided at or near the furnace.*